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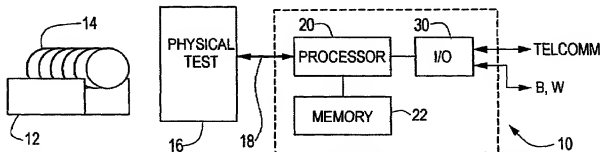
(57) Abstract: This method removes high frequency noise from shape data, significantly improves metrology system (10) performance and provides very compact representation of the shape. This model-based method for wafer shape reconstruction from data measured by a dimensional metrology system (10) is best accomplished using the set of Zernike polynomials (matrix L). The method is based on decomposition of the wafer shape over the complete set of the spatial function. A weighted least squares fit is used to provide the best linear estimates of the decomposition coefficients (Bnk). The method is operable with data that is not taken at regular data points and generates a reduced data field of Zernike coefficients compared to the large size of the original data field.

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